**CLAIMS**

1. A deconvolution method of agile pulse repetition time sampled signals $x(t_m)$ comprising the following steps:

- combining the pulses with the same carrier frequency in a burst;
- transforming the obtained signals from time to frequency domain; and
- deconvoluting of a spectra of the frequency domain.

2. The deconvolution method according to claim 1, further comprising computing of the discrete Fourier transform of the samples by frequency within the time to frequency transformation step.

3. The deconvolution method according to claim 1, further comprising, within the time to frequency transformation step, the following sub-steps:

- computing a sampling scheme spectrum; and
- searching L non-zero components of the sampling scheme spectrum.

4. The deconvolution method according to claim 2 further comprising, within the time to frequency transformation step, the following sub-steps:

- computing a sampling scheme spectrum; and
- searching L non-zero components of the sampling scheme spectrum.

5. The deconvolution method according to claim 1 further comprising, if $x(t_m)$ is an irregular pulse repetition time sampled signal, an irregular samples $x(t_m)$ to regular zero-padded samples $r(iT_\varepsilon)$ conversion step between the combination and the time to frequency transformation steps].

6. The deconvolution method according to claim 2 further comprising, if $x(t_m)$ is an irregular pulse repetition time sampled signal, an irregular samples $x(t_m)$ to regular zero-padded samples $r(iT_\varepsilon)$ conversion step between the combination and the time to frequency transformation steps.

7. The deconvolution method according to claim 3 further comprising, if $x(t_m)$ is an irregular pulse repetition time sampled signal, an irregular

samples $x(t_m)$ to regular zero-padded samples $r(iT_\varepsilon)$ conversion step between the combination and the time to frequency transformation steps.

8. The deconvolution method according to claim 4 further comprising, if $x(t_m)$ is an irregular pulse repetition time sampled signal, an irregular samples $x(t_m)$ to regular zero-padded samples $r(iT_\varepsilon)$ conversion step between the combination and the time to frequency transformation steps.

9. The deconvolution method according to claim 1 further comprising, between the time to frequency transformation step and the deconvolution step, the following steps:

- isolating of the clutter spectra by assuming clutter spreads over more than a few range gates;
- estimating of the clutter spectral lines from the mean and the width of the isolated clutter spectra; and
- subtracting of the estimated clutter spectra from the total spectrum.

10. A deconvolution system of agile pulse repetition time sampled signal $x(t_m)$ comprising:

- means for combining the pulses with the same frequency in a burst;
- means for transforming these pulses from time to frequency domain; and
- means for deconvolving of the spectra.

11. The deconvolution system according claim 10, further comprising means for converting irregular samples $x(t_m)$ to regular zero-padded samples $r(iT_\varepsilon)$, these means for converting receiving the irregular pulses grouped by frequency from the means for combining and transmits the zero-padded samples to the means for transforming.

12. The deconvolution system according to claim 11, further comprising between the means for transforming and the means for deconvolving:

- means for isolating the clutter spectra in dft(r) by assuming clutter spreads over more than a few range gates;

- means for estimating the clutter spectral lines from the mean and the width of the isolated clutter spectra; and
- means for subtracting the estimated clutter spectra from the total spectrum.

13. The deconvolution system according to claim 12, further comprising between the means for transforming and the means for deconvolving:
- means for isolating the clutter spectra in dft(r) by assuming clutter spreads over more than a few range gates;
- means for estimating the clutter spectral lines from the mean and the width of the isolated clutter spectra; and
- means for subtracting the estimated clutter spectra from the total spectrum dft(r).

14. An emitting/receiving system comprising:

an antenna;

a reference oscillator;

means for synthesising a carrier frequency connected to the reference oscillator;

means for synthesising a pulse repetition frequency connected to the reference oscillator; and

an analogue to digital converter and a processor comprising the processor implements the deconvolution method according to claim 1.

15. An emitting/receiving system comprising:

an antenna;

a reference oscillator;

means for synthesising a carrier frequency connected to the reference oscillator, means for synthesising a pulse repetition frequency connected to the reference oscillator; and

an analogue to digital converter and a processor comprising the processor implements the deconvolution method according to claim 2.

16. The emitting/receiving system comprising:
an antenna;
a reference oscillator;
means for synthesising a carrier frequency connected to the reference oscillator, means for synthesising a pulse repetition frequency connected to the reference oscillator; and
an analogue to digital converter and a processor comprising the processor implements the deconvolution method according to claim 5.

17. The deconvolution method according to claim 1, wherein said method is performed in a radar system.

18. The deconvolution system according to claim 10, whrein said system is a radar system.

19. The emitting/receiving system according to claim 14, wherein said system is a radar system.

20. The method according to claim 1, wherein said method is performed as an anti-jamming method.